4:Grajdanzev--93 S-4 (no date) 1942 Formosans
116, 241, 255, 257, 433

"Thus the predominant position in Taiwan's industry—from seventy-one to seventy-four per cent of the total—is occupied by the food industry. The latter consists chiefly of the production of sugar from sugar cane, and, to a lesser degree, of the canning of pineapples. In other words, Taiwan industry is closely connected with its agriculture and is largely the transformation of agricultural products into forms suitable for consumption or for storage and transportation. All other industries show little signs of growth. Ceramics and 'other industries' were at the same level in 1937 as they were in 1929, the lumber, textile, metal and machine industries show an increase, but in absolute amounts this increase is small, and only the chemical industry is of any importance, producing about nine per cent of the gross value."

4:Grajdanzev--97 S-4 (no date) 1942 Formosans
116, 257, 377, 433, 473

"Our analysis has shown that in Taiwan only the electric power, chemical, and food industries are large-scale, and that among them the electric power and sugar industries tower far above the rest—in these the corporations would be huge even by the standards of industrially developed nations. We saw that in agriculture Taiwan is an island of contrasts—huge landholdings and poor 'independent' landowners and tenants. The same picture appears in industry and will become clearer on examination of some individual industries for which data are available. We saw that in Taiwan one should distinguish between the progress and prosperity of agriculture in general and of the agriculture of the small Chinese farmers. The same phenomenon appears in industry."

4:Grajdanzev--97-98 S-4 (no date) 1942 Formosans
116. 255. 257. 433

"As was shown above. the food industry occupies a dominant [98] position in the industry of Taiwan. Its composition is as follows: Sugar makes up seventy-seven per cent of the gross value product of the food industry, molasses and candy four per cent, canned pineapples five per cent. and tea five per cent. As will be seen, production of these is concentrated in a few companies.

Gross Value of Production of the Industry,
(1,000 yen)

Sugar	202.240	Fishery products	2,172
Tea	13,452	Soft drinks	1,639
Canned pineapples	12,197	Starch	1,561
Molasses	6,389	Ice	1,496
Flour	6,013	Miso*	789
Candy	5,315	Other foods	5,562
Soya	2,427	Total	261,252"

*Bean paste used as a food.

4:Grajdanzev--98 S-4 (no date) 1942 Formosans -1-2
116, 257, 477, 563

"Before the Japanese occupation sugar production was carried on in small Chinese enterprises. But these enterprises with their primitive technique, animal power and low-quality products, were compelled to give ground step by step before the modern mills constructed and operated by the Japanese companies. The rapid extinction of these small enterprises and the growth of production of the modern mills may be seen from the following table.

Production of Sugar in Taiwan
(tons)

Year (Nov.- Oct.)	In modern mills	In improved mills	In primitive mills	Total
1905	4,535	385	44,659	49,579
1915	187,839	11,166	9,463	208,468
1917	409,165	26,560	22,367	458,092
1921	241,169	5,217	6,348	252,734
1925	467,264	4,824	7,451	479,539
1927	402,611	3,343	5,186	411,140
1929	777,931	5,776	5,621	789,328
1930	798,304	7,050	5,130	810,484
1932	977,239	6,744	5,065	989,048
1933	616,840	10,070	6,814	633,724

Production of Sugar in Taiwan [Cont.]
(tons)

Year (Nov.-Oct)	In modern mills	In improved mills	In primitive mills	Total
1934	634,403	4,721	7,919	647,043
1935	942,712	9,994	12,946	965,652
1936	880,552	10,402	10,725	901,679
1937	987,451	10,423	9,478	1,007,352
1938	...	...	...	989,778
1939	...	...	...	1,377,000

From this it appears that while in 1905 only nine per cent of the sugar was produced in modern mills, in 1937 these produced ninety-eight per cent of the total. Primitive mills and the so-called 'improved' mills had inevitably to lose the position they occupied."

"Production of sugar in modern mills is concentrated in the hands of nine Japanese corporations, [99] and of these, six produce ninety-seven per cent of all the sugar produced in modern mills and ninety-five per cent of all that produced in Taiwan. In the table on page 100 information is given concerning each of these six largest corporations. Unfortunately this information is not complete. These corporations are closely connected with many other enterprises in Taiwan and also have enterprises in the Pacific Islands under Japanese mandate, in Java and in other southern colonies (1). Many of these enter-

1. They also have refineries in Japan proper. Sugar produced in Taiwan is not refined there.

prises have nothing to do with sugar. But even so, the information given is interesting because it does throw some light on their activities. The paid-up capital and reserves of three of these corporations is about ¥100 million each. The amount of reserves is explained by the remarkable rate of profit which they receive—34 to 40 per cent is 'normal' for them. A lower rate of profit, as in the case of Ensuiko Seito Corporation (20.2 per cent) may be explained by the fact that the corporation has recently doubled its capital, investing it in new enterprises which do not yet bring profit. Thus the rate of profit in the sugar industry is extraordinarily high for all companies. It was shown above that the farmers did not receive any benefits either from the increase of the sugar

content of the cane, nor from the increase of protection; it now becomes clear that these benefits fell to the manufacturers, for only in this way were these huge profits possible (2).

2. But a certain part of these profits is the result of higher prices paid by the Japanese population for the benefit of these companies, protected by the tariff wall."

4:Grajdanzev--100 S-4 (no date) 1942 Formosans
116, 257, 433, 473, 477

INFORMATION CONCERNING THE SIX LARGEST SUGAR CORPORATIONS OF TAIWAN 1939

	Taiwan Seito	*Dainippon Seito*	*Meiji Seito*	*Formosa Seito*	*Teikoku Seito*	*Ekawa Seito*
Established	1901	1896	1908	1908	1910	1927
Paid-up cap. (1,000 yen)	43,080	56,332	45,000	36,938	22,050	11,250
Reserves (1,000 yen)	47,138	23,093	41,500	3,430*	8,081	1,112(1937)
Principal shareholders:	The Emperor of Japan	Toyama-Seimei†	Daichi-Seimei†	Shinei-Sangyo	Yamaguchi	not published
	Mitsui [illegible]	Meiji-Seimei		Meiji-Seimei†	Nippon-Seimei†	
	Nikkoku chokin Bank	Tokyo-Seimei			Meiji-Seimei	
	Mitsubishi-Shanghai	Kaijo-Seimei			Yasuda Bank	
		Nippon-Seimei				
		Yasuda				
Landholdings in Taiwan (ko)	46,830	17,900	13,569	...	3,274	...
Sugar production in 1937/38 (1,000 tons)	256.7	238.6	176.9	150.4	70.6	42.6
Production of molasses, 1936/37 (1,000 tons)	52.4	47.9	33.5	29.5	11.6	...
Other interests	65.7 km. of railways	1,000 km. of railways	118 km. of railways	Alcohol	30 km. of railways	...
	Alcohol	Alcohol	Alcohol	Pulp	Roads	Alcohol
	Refineries in Japan	Etc., etc.	Refineries	Railways	Alcohol	Forestry
	Etc., etc.		Rubber	Agriculture	Etc., etc.	Colonization
			Pulp	Mining		Etc., etc.
			Etc., etc.	Lumber		
				etc., etc.		
Rate of profit (%)	44.65	34.5	40.0	20.2	22.0	20.7
Dividend rate (%)	12	12	12	8	10	10

* Beside its own capital the company report mentions ¥40.6 million of borrowings.
† *Seimei* (life) are life insurance companies.
Sources: 1. *Kabushiki kaisha nenkan*, 1940; 2. *Toyo keizai, Kabushiki kaisha nenkan*, 1939; 3. Kono, R., *Seito kaisetsu*, 1938.

249 defeated the Dutch, annual production rose to
433 18,000 metric tons, a large part of which was ex-
439 ported to the Philippines and to Japan. In 1870, total production amounted to 73,000 metric tons; 63,7000 metric tons were exported. During the Japanese occupation of Formosa, the island's sugar industry was developed to supply the require-
257 ments of Japan proper. Four Japanese companies
433 controlled Formosa' sugar industry. During the
471 1930's, 42 mills able to process a total of 65,000 metric tons of sugar cane were in operation. The sugar syndicate owned 117 hectares of land, a railway extending 2,800 kilometers, had a staff of 5,000, employed 19,000 workers, and generated its own power. After the war, all of the mills came under the control of the government-owned Taiwan Sugar Corporation. In 1947, six mills were incorporated, bringing the total number of mills in operation to 36. At present, only 26 mills are in operation; for reasons of economy, ten mills were shut in the period 1951-52, and production goals for 1954-55 were lowered.

472 In addition to the Taiwan Sugar Corporation,
252 which is the sole producer of refined sugar, some 52 private companies belonging to the Taiwan Brown Sugar Association produce brown sugar for domestic use and foreign export.

257 The milling capacity of the 26 mills controlled
433 by the Taiwan Sugar Corporation is 49,350 metric tons of sugar cane per day; sugar recovery is about 12 per cent. These mills operate an average of 150

433
259 days a year. The Taiwan Brown Sugar Association's member mills produce only 50,000 metric tons a year, representing approximately 10 per cent to 14.5 per cent of the sugar cane processed.

Since Formosa is only allowed to export 600,000 metric tons of sugar each year, according to the terms of the International Sugar Agreement, recent efforts have been directed toward modernization of plant facilities. The level of production has been reduced, and today Formosa processes only enough sugar to meet the demands of domestic consumption and the export quota.[18] Statistics on the production of sugar and sugar by-products are given in the table below:

PRODUCTION OF SUGAR AND SUGAR BY-PRODUCTS */
(in 1,000 metric tons)

	Sugar	Brown Sugar	Molasses	Yeast (1,000 kgs.)
1937	987	20	189	48
1938	967	24	206	119
1939	1,374	45	324	152
1952	520	11	143	61
1953	883	19	212	279
1954	701	13	185	638

*/ Taiwan Economic Data Book, Vol. 3, Part II, 1955.

18. Local consumption requirements for 1955 may be estimated at 108,800 metric tons, according to the consumption pattern established during 1932-41. During this period per capita consumption of sugar averaged 10.46 kilograms a year.

of 303,400 metric tons) and that of industrial salt to 67,000 metric tons (as compared to peak production of 465,000 metric tons). The production of chemical fertilizer (33,800 metric tons before the war) had come to a halt. Tea processing plants and pineapple packing plants stood deserted. In short, by V-J Day the ravages of war, materials shortages, and lack of maintenance had almost paralyzed the industry of Taiwan. The railroads had worn out no less than 1400 steel bridges which had to be classified as unsafe to use.

After V-J Day, rehabilitation work on the railroads was given a high priority. Eroded steel bridge spans were removed, worn-out sleepers and rails were replaced, road beds were reconditioned. Today, passenger traffic exceeds the peak load of the prewar period; freight traffic, after tripling itself in one year, is approaching prewar peak.

Rehabilitation of the power system made great demands on the ingenuity of the available Chinese engineers. Little foreign exchange was available with which to buy needed replacements, so that the repairs had to be accomplished by reworking obsolete and broken equipment scattered about over the island. Through tedious patching and repairing operations, and the acquisition of a few spare parts that could not be improved, they tripled generating capacity in two years. By 1951, capacity had reached an all time high of 217,000 KW. Today coal (1,451,000 metric tons in 1952), cement (389,000 tons in 1951), chemical fertilizers (more than three times prewar production), petroleum, cotton yarn (three times Japanese peak production) and cotton piece goods (four times Japanese peak production) have all surpassed prewar production figures.

The sugar industry, which, as in the past, is Taiwan's most important source of foreign exchange, has done less well by comparison with prewar standards, but not, or at least not primarily, because rehabilitation operations failed to be carried out. In 1945, 27 of 36 plants stood seriously damaged. By 1948, all the factories and plantation railways had been completely rehabilitated, and by 1950 sugar production had climbed back to 630,000 metric tons. The Taiwan Sugar Corporation's capacity is now over one million tons a year. In 1949–50, however, sugar dropped in price on the world market, and farmers turned from sugar to rice. In 1951–52, the world market price began to rise, and sugar production is gradually returning to its previous high levels.

Paper and pulp mills, machinery shops, shipbuilding, and aluminum works have, likewise, been gradually restored. Another worthwhile project has been the development of a fishery industry which has improved the Taiwanese diet (including that of the Nationalist Army) without great expenditures. American economic aid has played an important role in the rehabilitation and development of all these industries.

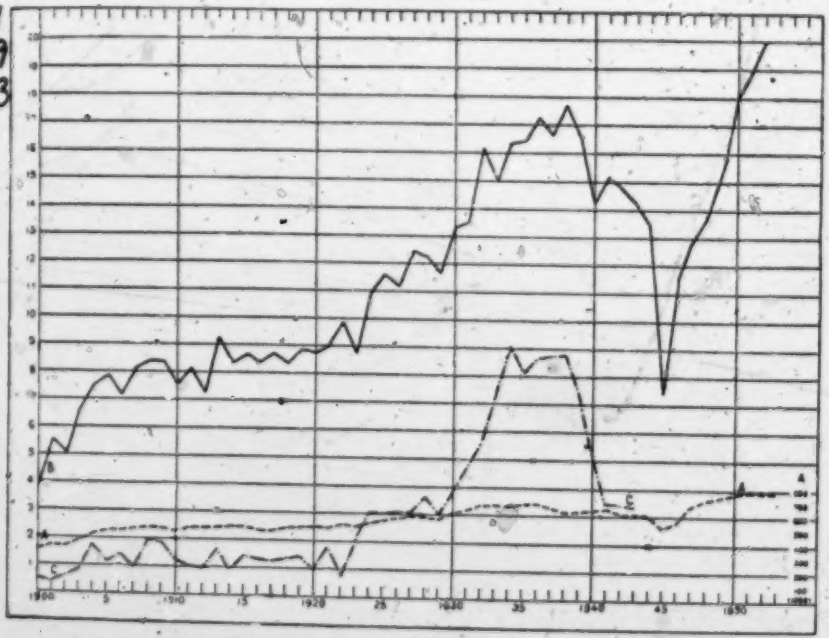
A labor insurance policy was put into effect on 1 March 1950. Its object is described as "safeguarding the livelihood of the workers and promoting harmonious relations between labor and management so as to ensure social security and high production." According to the Labor Insurance Regulations, all workers employed in public and private factories, mines, salt fields, communications, and public utilities in Taiwan shall be insured. It is compulsory labor insurance on a limited scale. The benefits are insurance against injury, death, maternity, disability, and old age. It also has provision for free medical clinics. This new system of social insurance was put into effect with the cooperation of the Chinese Federation of Labor, the Free China Labor League, and the Provincial General Labor Union. Their delegates also sit as members of the legislature of the provincial government.

The government has also carried out a tax reform and overhauled the tax collection system. The reform program went into effect on 1 January 1951. The number of distinct taxes was reduced from 20 to 11, leaving the income, inheritance, stamp, commodity, land, business, slaughter-house, entertainment and amusement, vehicle license, and household taxes.

48: Chen E-4 (no date) 1955 ADl Formosa ADl

Productivity was raised by improvements in various aspects. The rapid increase in the output of rice from the 1920's was the result of the adoption of a new strain (Ponlai rice). By the 1930's, the production of rice in Taiwan was so large as to be twice its local demand, and the surplus rice was exported to Japan. Though the price of Taiwan rice was controlled by the Japanese government and the profit of trade in rice was mainly monopolized by big Japanese traders, the increase of production did have some benefits for Taiwanese, and no doubt, this contributed to the lowering of the death rate after 1920.

Fig. 6 Acreage of Cultivation, Amount of Production and Exportation of Rice, Taiwan, 1900-1953



A: Acreage of Cultivation (unit: 1,000 ha) B: Amount of Production (unit: 1,000,000 hectoliter)
C: Amount of Net Export (unit: 1,000,000 hectoliter)
Source, 1900-1948, from the Rice of Taiwan, 1949, Taipei.
1949-1952, from Taiwan Agricultural Yearbook, 1952, Taipei.

The condition of sugar was a little different from that of rice. The profit in sugar manufacturing was exclusively monopolized by the Japanese enterprisers. But it is undeniable that, in respect to the improvement of agricultural techniques and the raising of productivity, substantial effects were obtained.

As pointed out by W.S. Thompson, "underfeeding weakens the individual and renders him less resistant to disease, whether it be of the degenerative or of the germ